

**AMENDMENT TO THE CLAIMS:**

1. **(Previously presented)** An image processing method comprising:
  - performing noise detection to an image;
  - removing noise from a predetermined region of the image, on the basis of the result of the noise detection;
  - obtaining the ratio of an area targeted for noise removal to the predetermined region of the image, on the basis of the result of the noise detection;
  - generating an image indicating the ratio, on the basis of the ratio obtained in said obtaining the ratio; and
  - superimposing the image generated in said generating an image on the image before being subjected to noise removal in said removing noise or on the image from which noise has been removed, to generate a composite image for display.
  
2. **(Previously presented)** An image processing method comprising:
  - performing noise detection to an image;
  - removing noise from a predetermined region of the image, on the basis of the result of the noise detection;
  - obtaining the ratio of an area targeted for noise removal to the predetermined region of the image, from the result of the noise detection;
  - obtaining the statistics on the ratios obtained in said obtaining the ratio over a predetermined period of time;
  - generating an image indicating the statistics, on the basis of the statistics obtained in said obtaining the statistics; and
  - superimposing the image generated in said generating an image on the image before being subjected to noise removal in said removing noise or on the image from which noise has been removed, to generate a composite image for display.

3. **(Previously presented)** An image processing method comprising:

detecting the position and intensity of noise in an image;

removing noise from a predetermined region of the image, on the basis of the position and intensity of noise detected in said detecting;

obtaining, for each intensity level of noise, the ratio of an area targeted for noise removal to the predetermined region of the image, on the basis of the position and intensity of noise detected in said detecting; and

generating an image indicating the ratio for each intensity level of noise, on the basis of the ratio obtained in said obtaining; and

superimposing the image generated in said generating on the image before being subjected to noise removal in said removing noise or on the image from which noise has been removed, to generate a composite image for display.

4. **(Previously presented)** An image processing method comprising:

performing detection of position and intensity of noise, to an image;

removing noise from a predetermined region of the image, on the basis of the position and intensity of noise detected in said performing;

obtaining, for each intensity level of noise, the ratio of an area targeted for noise removal to the predetermined region of the image, on the basis of the position and intensity of noise, detected in said performing;

obtaining, for each intensity level of noise, the statistics on the ratios obtained in said obtaining the ratio over a predetermined period of time;

generating an image indicating the statistics, for each intensity level of noise on the basis of the statistics obtained in said obtaining the statistics; and

superimposing the image generated in said generating an image on the image before being subjected to noise removal in said removing noise or on the image from which noise has been removed, to generate a composite image for display.

5. **(Previously presented)** An image processing method comprising:  
detecting the position and intensity of noise in an image;  
removing noise from the image, on the basis of the position and intensity of noise detected  
in said detecting;  
generating an image indicating pixels included in an area of the image targeted for noise  
removal, using a predetermined color according to the intensity of noise, on the basis of the position  
and intensity of noise detected in said detecting; and  
superimposing the image generated in said generating an image on the image before being  
subjected to noise removal in said removing noise or on the image from which noise has been  
removed, to generate a composite image for display.

6. **(Cancelled)**

7. **(Previously presented)** An image processing method as defined in Claim 5, wherein the  
intensity of the noise detected in said detecting is only one, and the color of the image generated in  
said generating is only one.

8. **(Currently amended)** An image processing method as defined in Claim 6, comprising:  
detecting noise in an image;  
removing noise from the image on the basis of the result of said detecting noise; and  
spatially combining a part of the image before being subjected to noise removal in said  
removing noise and a part of the image from which noise has been removed so as to display the same  
on the screen, respectively, to generate a composite image for display,

wherein said spatially combining comprises cutting partial images of the same region from  
the image before being subjected to noise removal in said removing noise and the image from which  
noise has been removed, respectively, and generating an image in which the partial images are  
arranged vertically or horizontally.

9. **(Previously presented)** An image processing method as defined in Claim 1 further comprising:

decoding an image code sequence to generate a decoded image;

performing noise detection using information included in the image code sequence; and

removing noise from the decoded image obtained in said decoding, on the basis of the result of the noise detection.

10. **(Previously presented)** An image processing method as defined in Claim 1, wherein the noise is one of blocking artifact and ringing artifact.

11. **(Previously presented)** An image processing method as defined in Claim 1, wherein the predetermined region to be subjected to noise removal in said removing noise is an assembly of pixels in the vicinity of a boundary of each block.

12. **(Previously presented)** An image processing apparatus comprising:

noise detection means for performing noise detection to an input image;

noise removal means for removing noise from a predetermined region of the input image, on the basis of the result of the noise detection;

arithmetic means for obtaining the ratio of an area targeted for noise removal to the predetermined region of the input image, on the basis of the result of the noise detection;

image generation means for generating an image indicating the ratio, on the basis of the ratio obtained by the arithmetic means; and

image composition means for superimposing the image generated by the image generation means on the image before being subjected to noise removal by the noise removal means or on the image from which noise has been removed, to generate a composite image for display.

13. (**Previously presented**) An image processing apparatus comprising:

- noise detection means for performing noise detection to an input image;
- noise removal means for removing noise from a predetermined region of the input image, on the basis of the result of the noise detection;
- arithmetic means for obtaining the ratio of an area targeted for noise removal to the predetermined region of the input image, from the result of the noise detection;
- statistics calculation means for obtaining the statistics on the ratios obtained by the arithmetic means over a predetermined period of time;
- image generation means for generating an image indicating the statistics, on the basis of the statistics obtained by the statistics calculation means; and
- image composition means for superimposing the image generated by the image generation means on the image before being subjected to noise removal by the noise removal means or on the image from which noise has been removed, to generate a composite image for display.

14. (**Previously presented**) An image processing apparatus comprising:

- noise detection means for performing detection of position and intensity of noise, to an input image;
- noise removal means for removing noise from a predetermined region of the input image, on the basis of the position and intensity of noise detected by the noise detection means;
- arithmetic means for obtaining, for each intensity level of noise, the ratio of an area targeted for noise removal to the predetermined region of the input image, on the basis of the position and intensity of noise detected by the noise detection means;
- image generation means for generating an image indicating the ratio for each intensity level of noise, on the basis of the ratio obtained by the arithmetic means; and
- image composition means for superimposing the image generated by the image generation means on the image before being subjected to noise removal by the noise removal means or on the image from which noise has been removed, to generate a composite image for display.

15. **(Previously presented)** An image processing apparatus comprising:

noise detection means for performing detection of position and intensity of noise, to an input image;

noise removal means for removing noise from a predetermined region of the input image, on the basis of the position and intensity of noise detected by the noise detection means;

arithmetic means for obtaining, for each intensity level of noise, the ratio of an area targeted for noise removal to the predetermined region of the input image, on the basis of the position and intensity of noise detected by the noise detection means;

statistics calculation means for obtaining, for each intensity level of noise, the statistics on the ratios obtained by the arithmetic means over a predetermined period of time;

image generation means for generating an image indicating the statistics, for each intensity level of noise, on the basis of the statistics obtained by the statistics calculation means; and

image composition means for superimposing the image generated by the image generation means on the image before being subjected to noise removal by the noise removal means or on the image from which noise has been removed, to generate a composite image for display.

16. **(Previously presented)** An image processing apparatus comprising:

noise detection means for performing detection of position and intensity of noise, to an input image;

noise removal means for removing noise from the input image, on the basis of the position and intensity of noise detected by the noise detection means;

image generation means for generating an image indicating pixels included in an area of the input image targeted for noise removal, using a predetermined color according to the intensity of noise, on the basis of the position and intensity of noise detected by the noise detection means; and

image composition means for superimposing the image generated by the image generation means on the image before being subjected to noise removal by the noise removal means or on the image from which noise has been removed, to generate a composite image for display.

17. **(Cancelled)**

18. **(Original)** An image processing apparatus as defined in Claim 16, wherein the intensity of the noise detected by the noise detection means is only one, and the color of the image generated by the image generation means is only one.

19. **(Currently amended)** An image processing apparatus ~~as defined in Claim 17, comprising:~~

noise detection means for performing noise detection to an input image;

noise removal means for removing noise from the input image on the basis of the result of the noise detection; and

image composition means for receiving the input image and the output image from the noise removal means, and spatially combining a part of the input image with a part of the output image from the noise removal means so as to display the same on the screen, to generate a composite image to be output,

wherein the image composition means cuts partial images of the same region from the input image and the output image from the noise removal means, respectively, and generates an image in which the partial images are arranged vertically or horizontally.

20. **(Previously presented)** An image processing apparatus as defined in Claim 12 further comprising:

image decoding means for decoding an image code sequence to generate a decoded image;

said noise detection means receiving the image code sequence, and performing noise detection using information included in the image code sequence; and

said noise removal means removing noise from the decoded image outputted from the image decoding means, on the basis of the result of the noise detection.

21. **(Previously presented)** An image processing apparatus as defined in Claim 12, wherein the noise is one of blocking artifact and ringing artifact.

22. **(Previously presented)** An image processing apparatus as defined in Claim 12, wherein the predetermined region to be subjected to noise removal by the noise removal means is an assembly of pixels in the vicinity of a boundary of each block.

23. **(Previously presented)** An image processing method as defined in Claim 2 further comprising:

decoding an image code sequence to generate a decoded image;  
performing noise detection using information included in the image code sequence; and  
removing noise from the decoded image obtained in said decoding, on the basis of the result of the noise detection.

24. **(Previously presented)** An image processing method as defined in Claim 3 further comprising:

decoding an image code sequence to generate a decoded image;  
performing noise detection using information included in the image code sequence; and  
removing noise from the decoded image obtained in said decoding, on the basis of the result of the noise detection.

25. **(Previously presented)** An image processing method as defined in Claim 4 further comprising:

decoding an image code sequence to generate a decoded image;  
performing noise detection using information included in the image code sequence; and  
removing noise from the decoded image obtained in said decoding, on the basis of the result of the noise detection.

26. **(Previously presented)** An image processing method as defined in Claim 5 further comprising:

decoding an image code sequence to generate a decoded image;

performing noise detection using information included in the image code sequence; and

removing noise from the decoded image obtained in said decoding, on the basis of the result of the noise detection.

27. **(Cancelled)**

28. **(Previously presented)** An image processing method as defined in Claim 2, wherein the noise is one of blocking artifact and ringing artifact.

29. **(Previously presented)** An image processing method as defined in Claim 3, wherein the noise is one of blocking artifact and ringing artifact.

30. **(Previously presented)** An image processing method as defined in Claim 4, wherein the noise is one of blocking artifact and ringing artifact.

31. **(Previously presented)** An image processing method as defined in Claim 5, wherein the noise is one of blocking artifact and ringing artifact.

32. **(Cancelled)**

33. **(Previously presented)** An image processing method as defined in Claim 2, wherein the predetermined region to be subjected to noise removal in said removing noise is an assembly of pixels in the vicinity of a boundary of each block.

34. **(Previously presented)** An image processing method as defined in Claim 3, wherein the predetermined region to be subjected to noise removal in said removing noise is an assembly of pixels in the vicinity of a boundary of each block.

35. **(Previously presented)** An image processing method as defined in Claim 4, wherein the predetermined region to be subjected to noise removal in said removing noise is an assembly of pixels in the vicinity of a boundary of each block.

36. **(Previously presented)** An image processing method as defined in Claim 5, wherein the predetermined region to be subjected to noise removal in said removing noise is an assembly of pixels in the vicinity of a boundary of each block.

37. **(Cancelled)**

38. **(Previously presented)** An image processing apparatus as defined in Claim 13 further comprising:

image decoding means for decoding an image code sequence to generate a decoded image;  
said noise detection means receiving the image code sequence, and performing noise detection using information included in the image code sequence; and

said noise removal means removing noise from the decoded image outputted from the image decoding means, on the basis of the result of the noise detection.

39. **(Previously presented)** An image processing apparatus as defined in Claim 14 further comprising:

image decoding means for decoding an image code sequence to generate a decoded image;  
said noise detection means receiving the image code sequence, and performing noise detection using information included in the image code sequence; and

said noise removal means removing noise from the decoded image outputted from the image decoding means, on the basis of the result of the noise detection.

40. **(Previously presented)** An image processing apparatus as defined in Claim 15 further comprising:

image decoding means for decoding an image code sequence to generate a decoded image;

said noise detection means receiving the image code sequence, and performing noise detection using information included in the image code sequence; and

said noise removal means removing noise from the decoded image outputted from the image decoding means, on the basis of the result of the noise detection.

41. **(Previously presented)** An image processing apparatus as defined in Claim 16 further comprising:

image decoding means for decoding an image code sequence to generate a decoded image;

said noise detection means receiving the image code sequence, and performing noise detection using information included in the image code sequence; and

said noise removal means removing noise from the decoded image outputted from the image decoding means, on the basis of the result of the noise detection.

42. **(Cancelled)**

43. **(Previously presented)** An image processing apparatus as defined in Claim 13, wherein the noise is one of blocking artifact and ringing artifact.

44. **(Previously presented)** An image processing apparatus as defined in Claim 14, wherein the noise is one of blocking artifact and ringing artifact.

45. **(Previously presented)** An image processing apparatus as defined in Claim 15, wherein the noise is one of blocking artifact and ringing artifact.

46. **(Previously presented)** An image processing apparatus as defined in Claim 16, wherein the noise is one of blocking artifact and ringing artifact.

47. **(Cancelled)**

48. **(Previously presented)** An image processing apparatus as defined in Claim 13, wherein the predetermined region to be subjected to noise removal by the noise removal means is an assembly of pixels in the vicinity of a boundary of each block.

49. **(Previously presented)** An image processing apparatus as defined in Claim 14, wherein the predetermined region to be subjected to noise removal by the noise removal means is an assembly of pixels in the vicinity of a boundary of each block.

50. **(Previously presented)** An image processing apparatus as defined in Claim 15, wherein the predetermined region to be subjected to noise removal by the noise removal means is an assembly of pixels in the vicinity of a boundary of each block.

51. **(Previously presented)** An image processing apparatus as defined in Claim 16, wherein the predetermined region to be subjected to noise removal by the noise removal means is an assembly of pixels in the vicinity of a boundary of each block.

52. **(Cancelled)**